IN THE CLAIMS

1. to 6. (Cancelled without prejudice).

7. (Original) An apparatus for sampling optical input signal, the apparatus comprising:

a split waveplate for spatially rotating polarization direction of a first portion of the input signal to a first rotated direction and spatially rotating polarization direction of a second portion of the input signal to a second rotated direction orthogonal to the first rotated direction; and

a sum frequency generator for generating sum frequency of the rotated input signal.

8. (Original) The apparatus recited in claim 7 wherein the sum frequency generator is periodically poled lithium niobate (PPLN).

9. (Original) The apparatus recited in claim 8 wherein the sum frequency generator is oriented in the first rotated direction.

10. (Original) The apparatus recited in claim 7 further comprising:

a probe pulse source for providing a probe pulse;

a dichroic splitter for directing the probe pulse toward the sum frequency generator.

11. (Original) A method of sampling optical input signal, the method comprising:

spatially rotating the input signal such that one half of the power of the input signal is within a first polarized portion of the input signal while the other half of the power of the input signal is within a second polarized portion of the input signal, the second polarized portion being orthogonally polarized relative to the first polarized portion; and

sampling the spatially rotated input signal.

12. (Original) The method of sampling optical input signal recited in claim 11 wherein the spatial rotation is performed using a split waveplate.

13. (Original) The method of sampling optical input signal recited in claim 11 wherein the step of sampling is performed using periodically poled lithium niobate (PPLN) oriented in the first rotated direction.

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